UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,895	02/10/2004	Jun Fang	MS1 - 3548US	3065

22801 7590 10/16/2007 LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201	**EXAMINER** LEE, WILSON

ART UNIT	PAPER NUMBER
2163	

MAIL DATE	DELIVERY MODE
10/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/776,895	FANG ET AL.
	Examiner	Art Unit	
	Wilson Lee	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>24 July 2007</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-5,10-15,17,20-23,25 and 30-34</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,2,4,5,10,11,14,15,17,20-22,25 and 30-34</u> is/are rejected.

7) ☒ Claim(s) <u>3,12,13 and 23</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>24 July 2007</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description: **"rows 202"** Corrected drawing sheets in compliance with 37 CFR 1.121(d)

are required in reply to the Office action to avoid abandonment of the application. Any

amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. Each

drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 5, 15, 25, 31, 33 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Regarding Claim 5, lines 1-2, "at least two operations comprises at least

all operations" is vague. Two operations comprise all operations? They totally

contradict each other.

Regarding Claim 15, lines 1-2, "at least two... comprises at least all of the group"

is vague. Two operations comprise all operations? They totally contradict each other.

Regarding Claim 25, lines 1-2, "at least all operations" is inconsistent with "at

least one operation" shown in Claim 34.

Claims 31, 33 are vague by virtue of their dependency on claims 5, 15.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 10, 11, 14, 15, 17, 20, 21, 22, 25, 30, 31, 32, 33, 34 are

rejected under 35 U.S.C. 102(e) as being anticipated by Gottlob et al. (US Patent

7,162,485).

Regarding Claim 1, Gottlob et al. (7,162,485) discloses a method for algebrizing

a syntax tree representation ("XML document trees", Col. 1, lines 27-28) of a relational

database query into a relational algebra representation ("formulating expressions that

evaluate to a string, a number or a boolean value", Col. 1, lines 28-30) said syntax tree

comprising a plurality of nodes ("selecting nodes", Col. 1, lines 27-28), the method

comprising performing at least two operations in a single pass (in step d. **"replacing

variable ... provided by an input variable binding"**, Col. 26, lines 47-49) through the

syntax tree representation, wherein at least one of the operations is selected from a

group of operations comprising: aggregate binding ("set of variable bindings", Col. 24,

line 58), constant folding ("replaced by the (constant) value", Col. 9,. line 31), and tree

translation ("translate function". Col. 15, line 27).

Regarding Claim 2, Gottlob discloses the method of claim 1 wherein said at least

two operations are executed in a predetermined order ("carry out the operation in time

given two node sets", Col. 15, lines 52-53) at each of said plurality of nodes[1].

Regarding Claim 4, Gottlob discloses the method of claim 1 wherein one of said

at least two operations comprises constant folding ("replaced by the (constant) value",

Col. 9, line 31)

Regarding Claim 5, Gottlob discloses the method of claim 1 wherein said at least

two operations comprises [at least all operations] from among a group of operations,

said group of operations comprising: aggregate binding ("set of variable bindings", Col.

24, line 58), Col. 9,. line 31), and tree translation ("translate function". Col. 15, line 27).

Regarding Claim 10, Gottlob discloses a method for algebrizing a syntax tree

representation ("XML document trees", Col. 1, lines 27-28) of a relational database

query into a relational algebra representation ("formulating expressions that evaluate to

a string, a number or a boolean value", Col. 1, lines 28-30), said syntax tree comprising

a plurality of nodes ("selecting nodes", Col. 1, lines 27-28), and said algebrizing

comprising a plurality of operations (such as aggregate binding "set of variable

bindings", Col. 24, line 58; and tree translation "translate function" Col. 15, line 27), said

---

[1] Fig. 4, node E5 has two operations: position () and last ().

method comprising the inclusion of constant folding ("replaced by the (constant) value",

Col. 9,. line 31)as an operation among said plurality of operations

Regarding Claim 11, Gottlob discloses a system for algebrizing a syntax tree

representation ("XML document trees", Col. 1, lines 27-28) of a relational database

query into a relational algebra representation ("formulating expressions that evaluate to

a string, a number or a boolean value", Col. 1, lines 28-30), said syntax tree comprising

a plurality of nodes, said system comprising:

- a plurality of operations, wherein at least one of the plurality of

  operations is selected from a group of operations, the group of

  operations comprising:

  o   aggregate binding ("set of variable bindings", Col. 24, line 58);

  o   tree translation ("translate function". Col. 15, line 27); and

a subsystem for performing at least two of the plurality of operations in a

single pass (in step d. **replacing variable** ... provided by an input **variable binding**",

Col. 26, lines 47-49) through said syntax tree representation.

Regarding Claim 14, Gottlob discloses the system of claim 11 wherein each of

said at least two of the plurality of operations are selected from the group of operations

such as aggregate binding ("set of variable bindings", Col. 24, line 58), Col. 9,. line 31),

and tree translation ("translate function". Col. 15, line 27).

Regarding Claim 15, Gottlob discloses the system of claim 11 wherein said at

least two of the plurality of operations comprises at least [all of the group] of operations

such as aggregate binding ("set of variable bindings", Col. 24, line 58), Col. 9,. line 31),

and tree translation ("translate function". Col. 15, line 27).

Regarding Claim 17, Gottlob discloses the system of claim 11 wherein said

algebrizing comprises one or more of: aggregate binding ("set of variable bindings", Col.

24, line 58), Col. 9, line 31), and tree translation ("translate function". Col. 15, line 27).

Regarding Claim 20, Gottlob discloses a system for algebrizing a syntax tree

representation ("XML document trees", Col. 1, lines 27-28) of a relational database

query into a relational algebra representation ("formulating expressions that evaluate to

a string, a number or a boolean value", Col. 1, lines 28-30), said syntax tree comprising

a plurality of nodes ("selecting nodes", Col. 1, lines 27-28), said system comprising: a

plurality of operations such as aggregate binding ("set of variable bindings", Col. 24, line

58), constant folding ("replaced by the (constant) value", Col. 9,. line 31), and tree

translation ("translate function". Col. 15, line 27); and constant folding ("replaced by the

(constant) value", Col. 9, line 31) as an operation among said plurality of operations.

Regarding Claim 21, Gottlob discloses a computer-readable medium comprising

computer-readable instructions for algebrizing a syntax tree representation ("XML

document trees", Col. 1, lines 27-28) of a relational database query into a relational

algebra representation ("formulating expressions that evaluate to a string, a number or a

boolean value", Col. 1, lines 28-30), said syntax tree comprising a plurality of nodes

("selecting nodes", Col. 1, lines 27-28), said computer-readable instructions comprising

instructions for performing pass through-constant folding ("replaced by the (constant)

value", Col. 9, line 31) on said syntax tree representation.

Regarding Claim 22, Gottlob discloses the computer-readable instructions of claim 34, further comprising instructions for performing the plurality of operations executed-in a predetermined order ("carry out the operation in time given two node sets", Col. 15, lines 52-53) at each of said plurality of nodes (See footnote #1).

Regarding Claim 25, Gottlob discloses the computer-readable instructions of claim 34, wherein the plurality of operations comprises [at least all operations] from among the group of operations such as aggregate binding ("set of variable bindings", Col. 24, line 58), Col. 9,. line 31), and tree translation ("translate function". Col. 15, line 27).

Regarding Claim 30, Gottlob discloses a computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation ("XML document trees", Col. 1, lines 27-28) of a relational database query into a relational algebra representation ("formulating expressions that evaluate to a string, a number or a boolean value", Col. 1, lines 28-30), said syntax tree comprising a plurality of nodes ("selecting nodes", Col. 1, lines 27-28), and said algebrizing comprising a plurality of operations, said computer-readable instructions comprising instructions for constant folding ("replaced by the (constant) value", Col. 9, line 31) as an operation among said plurality of operations.

Regarding Claim 31, Gottlob discloses the method of claim 5 wherein said group of operations further comprises constant folding ("replaced by the (constant) value", Col. 9, line 31)

Regarding Claim 32, Gottlob discloses the system of claim 11 wherein said group of operations further comprises constant folding ("replaced by the (constant) value", Col. 9, line 31)

Regarding Claim 33, Gottlob discloses the system of claim 15 wherein said group of operations further comprises constant folding ("replaced by the (constant) value", Col. 9, line 31)

Regarding Claim 34, Gottlob discloses the computer-readable instructions of claim 21 further comprising instructions for performing a plurality of operations in a single pass (in step d. **"replacing variable** ... provided by an input **variable binding"**, Col. 26, lines 47-49) through the syntax tree representation ("XML document trees", Col. 1, lines 27-28), wherein at least one of the plurality of operations is selected from a group of operations comprising: aggregate binding ("set of variable bindings", Col. 24, line 58), constant folding ("replaced by the (constant) value", Col. 9, line 31), and tree translation ("translate function". Col. 15, line 27).

Allowable subject matter

Claims 3, 12, 13, 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission.

Any transmission not to be considered an official response must be clearly marked

"DRAFT".   The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office

10/16/07